

IN THE CLAIMS

Claim 1. (Currently Amended) A router, comprising:

a plurality of physical interfaces for receiving data from the network and assembling packets of data, a first processor supporting a first processing environment, at least one network processor for processing the packets of data, a switch fabric for switching the packets of data between physical interfaces, so that the router may receive data from the network, assemble the data into packets, process the packets, switch the packets, and then output at least some of the packets of data back onto the network;

an intelligent interface between the first processing environment and a management device external to the router, said intelligent interface being an interface other than one of the plurality of physical interfaces and comprising a second processor supporting a second processing environment independent of the first processing environment, the second processor being able to boot independent of a boot process of the first processing environment, an internal interface enabling the first processing environment to be accessed from the second processing environment, and an external interface connected to the second processing environment to enable the second processing environment to be accessed from the management device external to the router;

wherein the intelligent interface is configured to serve as an interface between the first processing environment and external resources during the run-time of the router to provide access for the first processing environment to at least one of an external storage facility, an external security device, and an external logging facility.

Claim 2. (Canceled)

Claim 3. (Previously Presented) The router of claim 1, wherein the first processing environment comprises a first kernel, and wherein the second processing environment comprises a second kernel.

Claim 4. (Previously Presented) The router of claim 1, wherein the second processor further comprises control logic enabling a new software image to be loaded onto the intelligent

interface, said new software image to be used by the second processing environment to configure the first processing environment.

Claim 5. (Previously Presented) The router of claim 4, wherein the intelligent interface comprises a memory, and wherein the new software image is stored in said memory.

Claim 6. (Previously Presented) The router of claim 1, wherein the second processor comprises control logic enabling information related to an operational condition of the first processor to be collected over the internal interface and transmitted over the external interface.

Claim 7. (Previously Presented) The router of claim 6, wherein the operational condition comprises at least one of Management Information Base values, logging information, and operational parameters.

Claim 8. (Previously Presented) The router of claim 6, wherein the second processor comprises control logic configured to enable diagnostic checks to be run on the first processing environment.

Claim 9. (Previously Presented) The router of claim 6, wherein the second processor comprises control logic enabling modifications to be made to the first processing environment over the internal interface.

Claim 10. (Previously Presented) The router of claim 1, wherein the external interface operates utilizing at least one of the Universal Serial Bus (USB) standards.

Claim 11. (Currently Amended) An intelligent management interface for a router, the router including at least one router processor controlling operation of the router in normal operation, the router further including physical interfaces and a switch fabric to receive data from the network, switch the data between the physical interfaces, and output the data back onto the network, the intelligent management interface comprising:

at least one port implementing a Universal Serial Bus (USB) standard and being an interface other than one of the plurality of physical interfaces;

at least one intelligent management interface processor supporting an independent operating environment for the intelligent management interface which is separate from the operating environment supported by the at least one router processor and which is able to boot separate from a boot process of the at least one router processor, the independent operating environment enabling the intelligent management interface to be active during the boot process of the at least one router processor; and

intelligence enabling the intelligent management interface to take actions on the router to control the boot process of the at least one router processor, the intelligence further being configured to enable the intelligent management interface to be available during run-time of the route processor to provide external access for the route processor to at least one of an external storage facility, an external security device, and an external logging facility.

Claim 12. (Previously Presented) The intelligent management interface of claim 11, wherein the intelligence performs diagnostic checks on the router.

Claim 13. (Previously Presented) The intelligent management interface of claim 11, wherein the intelligence uploads files to the router.

Claim 14. (Previously Presented) The intelligent management interface of claim 11, wherein the intelligence causes a new software image to be stored on the intelligent management interface, and causes the router to be restarted from the new software image.

Claim 15. (Previously Presented) The intelligent management interface of claim 11, wherein the intelligence controls the router before, during, and after a router boot process.

Claim 16. (Previously Presented) The intelligent management interface of claim 11, wherein the intelligence causes at least one of files and Management Information Base (MIB) information to be transmitted from the intelligent management interface to enable a network manager to manage the router during at least one of a router boot process and in a router run-time environment.

Claim 17. (Currently Amended) The intelligent management interface of claim 11, wherein the intelligence implements a Universal Serial Bus (USB) stack to enable the intelligent management interface to communicate over the USB port ~~an exterior interface~~ utilizing at least one of the USB standards.

Claim 18-22. (Cancelled)